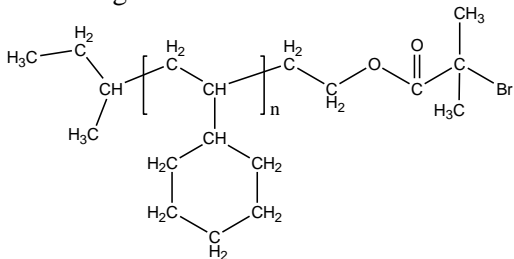


Synonym: Poly Cyclohexyl ethylene-b-4Vinylpyridine

$$\text{H}_3\text{C}-\text{C}(\text{H}_2)(\text{H}_3\text{C})-\text{CH}-\left[\text{C}(\text{H}_2)-\text{CH}(\text{C}_6\text{H}_4\text{N})\right]_n-\text{C}(\text{H}_2)-\text{CH}_2-\text{b}-\left[\text{C}(\text{H}_2)-\text{CH}(\text{C}_6\text{H}_4\text{N})\right]_m$$

Mn x 10 ³	PDI
5.3-b-3.8	1.25
Glass transition temperature (T _g):	132 °C

The polymer was synthesized by combination of anionic polymerization and controlled radical process.
Following macro-initiator used.



The product was characterized by size exclusion chromatography (SEC) and ¹H NMR.

Thermal analysis of the sample was done on a TA Q100 differential scanning calorimeter (DSC) at a heating rate of 10°C/min. The glass transition temperature (T_g) was determined as a midpoint of step change in heat flow curve for the second heating scan.

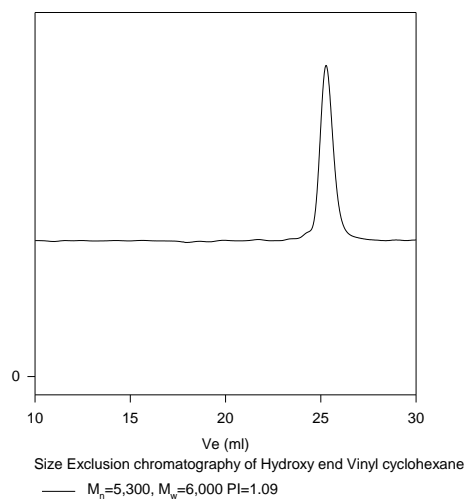
Chemical structure of P16164-SOH is shown above the ^1H NMR spectrum. The structure is a polyether chain with a central phenyl ring. Protons are labeled with numbers 1 through 30. The spectrum shows peaks at 2.00, 2.12, and 1.55 ppm. The chemical structure is labeled with "1.00 ppm" and "1.00 ppm".

The figure displays the ^1H NMR spectrum of P16167-VCH-OH. The chemical structure of the polymer is shown at the top, featuring a repeating unit with a vinylidene group and a hydroxyl group. The spectrum is plotted from 8.0 to 0.0 ppm. Key peaks are labeled with their chemical shifts: 0.27 ppm (a small peak), 3.63 ppm (a broad peak in the vinylidene region), and 13.00 ppm (a sharp peak in the aliphatic region). The x-axis is labeled 'ppm' and the y-axis represents intensity.

Chemical structure of P16168-VCH-Br is shown with integration values. The ^1H NMR spectrum (CDCl₃) displays peaks corresponding to the structure, with integration values provided for several peaks: 0.90, 1.20, 1.21, 1.53, 1.85, 1.42, 1.40, 1.44, 1.44, 4.08, 2.00, 2.00, 2.32, 1.94, 1.65, 1.68, 1.49, 1.36, 1.23, 1.11, 0.88, and 5.75. A scale bar indicates 650.00 Hz.

¹H NMR spectrum of P16169-VCH-4VP in CDCl₃. The x-axis represents chemical shift in ppm, ranging from 10.5 to 0.0. The spectrum shows a small peak at ~8.3 ppm (integral 2.00), a large solvent peak at 7.26 ppm, a peak at ~6.3 ppm (integral 1.93), and a complex multiplet between 1.0 and 2.0 ppm (integral 20.23).

GPC elugram of the first Block



DSC thermogram (2nd heating scan, 10°C/min):

